Strategies for Building and Communicating Trust in Electronic Banking: A Field Experiment

Shumaila Y. Yousafzai Cardiff University

John. G. Pallister Cardiff University

Gordon R. Foxall Cardiff University

ABSTRACT

The strong association between the high levels of trust and the banking sector has not yet been translated in the electronic world to its full potential. For the future growth of e-banking the issues of security and privacy must be removed. In an experimental setting, this study examines the effectiveness of potential trust-building strategies for e-banking and their impact on on-line customers' perceptions of trustworthiness of the bank, by specifically focusing on the information clues presented on the bank's Web site. Structural assurance and situational normality mechanisms both had an impact on customers' trustworthiness perceptions, suggesting that banks need to use a portfolio of strategies to build the customer's trust. The results further suggest that communication of meaningful and timely information has the potential to influence customers' trusting intentions. © 2005 Wiley Periodicals, Inc.

Psychology & Marketing, Vol. 22(2): 181–201 (February 2005) Published online in Wiley InterScience (www.interscience.wiley.com) © 2005 Wiley Periodicals, Inc. DOI: 10.1002/mar.20054 Electronic commerce is moving at the speed of light, but it is outpacing human time, the time needed to build trust. Trust has been identified as key to e-commerce (Keen, Balance, Chan, & Schrump, 2000), because it is crucial wherever risk, uncertainty, and interdependence exist (Mayer, Davis, & Schoorman, 1995). The banking sector is strongly associated with high levels of trust related to security and privacy issues in the physical environment. However, this association has not yet been translated in the electronic world to its full potential. Customers are reluctant to adopt e-banking because of security and privacy concerns and trust-related issues (Lee & Turban, 2001). Thus, the lack of customers' trust, both in the attributes of the bank and in the overall on-line environment, has been, and remains, an obstacle in the widespread adoption of e-banking.

Security, privacy, and trust are complex, multidimensional concepts that are changing as transactions expand from the physical world to the electronic world. Customers' trust in e-banking has some unique dimensions, that is, the distant and impersonal nature of the on-line environment, the extensive use of technology, and the inherent uncertainty of using an open technological infrastructure for transactions. The on-line environment does not allow customers the natural benefits of face-toface communications (Citera, Beauregard, & Mitsuya, 2005; DeRose, Hantula, Kock, & D'Arcy, in press)-to directly observe the service provider's behavior, or look into the service provider's eyes (Ba, Whinston, & Zhang, 1999)—assurance mechanisms on which humans have depended for ages. This temporal and spatial separation increases fears of opportunism arising from product and identity uncertainty. As Dellarocas (2001) noted, "... the more the two sides of a transaction are separated in time and space, the greater the risks" (p. 2). To further complicate the situation, there is concern about the reliability of the underlying technology and related infrastructure, and the extensive media coverage about privacy, security, and frauds on the Internet. Overall, these unique differences decrease customers' perceptions of control over their on-line transactions, increase their apprehensions about adopting e-banking, and provide unique challenges for banks to find ways in which to initiate and foster electronic relationships with their customers.

Literature in e-commerce has pointed to trust as a major obstacle in its growth and adoption (Gefen, Karahanna, & Straub, 2003). The widely cited study of Cheskin Research (1999) suggested to e-businesses that the customer's "untrust" perceptions must be overcome in order to build, confirm, and maintain trust. Determining a schema for developing and communicating on-line trust will help to transform a potential customer from a curious observer to one who is willing to perform on-line banking transactions. Shapiro (1987) called for research on how trust relationships are established, and Castelfranchi and Tan (2001) asked how electronic transactions can mimic the trust-building elements of physical-world transactions. Tyler and Kramer (1996) called for research on situational dimensions affecting trust; particularly the ways in which the e-commerce messages are constructed and used to affect trust, and asserted that the two potential ways to build on-line trust are through Web design and trust-building behavior.

The present study advances the previous research by integrating relevant trust literature and builds on the constructs of trusting beliefs and institution-based trust proposed by McKnight, Cummings, and Chervany (1998). This study explores the effectiveness of potential trust building strategies for e-banking and their impact on on-line customers' perceptions of trustworthiness of the bank, by specifically focusing on the information clues presented on the bank's Web site. The article simultaneously considers the implications of two facets of institution-based trust, that is, "structural assurance" and "situational normality." This is important because the trust literature has mentioned the significance of both factors in building trust (McKnight et al., 1998), but has rarely addressed them together. The former results in trusting behavior through dependable structures and promises and the latter results in trusting behavior because the situation is perceived to be comfortably typical.

CONCEPTUAL FOUNDATIONS AND FRAMEWORK

Trust and Trustworthiness

Following Mayer et al. (1995) and Rousseau, Sitkin, Burt, and Camerer (1998), customers' trust in e-banking is defined as willingness of customers to perform on-line banking transactions, expecting that the bank will fulfill its obligations, irrespective of their ability to monitor or control banks' actions. This definition captures two discrete but nonseparable aspects of trust in the context of e-banking. First, it involves the traditional view of trust in a specific party, i.e., the bank providing e-banking services, and second, it implicitly encompasses trust in the integrity of the transaction medium, that is, the Internet. This definition also confirms the two dimensions of trust proposed by McKnight et al. (1998) as the "institution-based trust" and "trusting beliefs." They defined *trusting belief* as the customers' perception of ability, benevolence, and integrity of the Web merchant. Institution-based trust was defined as the evaluation that the needed conditions are in place to anticipate a trusting outcome for an effort. Here it is proposed that in order to induce a customer to develop a positive expectation and eventually show a willingness to trust, the bank has the option to influence customers' trusting beliefs (perception of trustworthiness of the bank) through institution-based trust (trust on control mechanism).

Mayer et al. (1995) proposed ability, integrity, and benevolence as a parsimonious set of trustworthiness factors. They suggested that a trustee who possesses these traits is very desirable as an exchange partner, because customers will perceive that they will behave skillfully, ethically, kindly, and consistently in the exchange. However, they noted that these factors are not trust per se, but they help in building the foundations of trust. They also suggested that these characteristics are related, but separable, and that together they explain a large variance in trustworthiness while maintaining parsimony. McKnight et al. (1998) refers to these factors as trusting beliefs and separates them from trusting intentions, which are conceptually much closer to trusting behaviors. They defined trusting intentions as customer's willingness to depend on the Web merchant in a given situation. Behavioral willingness is proposed as a necessary ingredient of trust by researchers (Doney & Cannon, 1997; Moorman, Deshpande, & Zaltman, 1993), as it indicates a greater commitment to trust. It is proposed that the trust-building mechanism, while developing a positive perception of trustworthiness of the bank, would also influence the customer's trusting intentions. Figure 1 depicts the proposed schema for trust-building mechanism for e-banking.

When analyzing the role of reputation and trustworthiness for engendering trust in e-banking, the focal object is the bank. Therefore, the focus shall be on the concept of trusting beliefs (ability, integrity, and benevolence), which parallels the economic concept of endogenous uncertainty, that is, uncertainty about the market partner. Institution-based trust, on the other hand, will be referred to as trust in the system, setting, and environment, which parallel the concept of exogenous or environmental uncertainty (Hirshleifer & Riley, 1979).

Institution-Based Trust

The concept of institution-based trust proposed by McKnight et al. (1998) represents the beliefs held by customers about impersonal structures and favorable conditions, in which they feel safe, assured, and comfortable about the prospect of depending on the businesses. The authors defined two types of institutional-based trust as (a) structural assurances, defined as the belief that "success is likely because such contextual conditions as promises, contracts, regulations, and guarantees are in place," and (b) situational normality, defined as the belief that "success is likely because the situation is normal" (p. 478).





Structural Assurance

Structural assurance is an institution-based trust construct and comes from the sociological tradition. Shapiro (1987) refers to structural safeguards in terms of institutional side bets such as regulations, guarantees, and legal recourse. Sociologists found that trust in people is supported by the institutional structures that create an environment in which one feels safe and secure to participate. Tracing the history of regulations for institutions in America, Zucker (1986) found that people trusted one another not because they knew each other personally, but because licensing or auditing or laws or governmental enforcement bodies were in place to make sure that the other person was either afraid to harm or will be punished for doing so. McKnight and Chervany (2000) suggested that structural assurance is related to customers' trusting beliefs, as they are more likely to trust in a safe and secure environment. Structural assurance leads the customer to believe that it is not in the best interest of the businesses to defect (Doney & Cannon, 1997), based on the assumption that the trust violations will damage reputations and reputation matters a lot to the businesses (Rousseau et al., 1998). The following subsections propose five trust-building strategies based on structural-assurance mechanism.

Clarifying Security Policies. Security has been widely recognized as one of the main obstacles to the adoption of e-banking (Aladwani, 2001; Bestavros. 2000: Furnell & Karweni, 1999). Security concerns arise from the use of an open network, where customers are afraid that their personal and financial information will become available to others via the Internet and can be used for fraudulent purposes. The need for security has already been recognized within the e-banking community and a number of technologies have been developed to secure electronic transactions, for example, 128-bit RSA encryption, digital certificates, and firewalls. Then the question of what is keeping the customers away arises. According to Furnell and Karweni (1999), customers with a greater awareness of security will be more likely to use Internet-based services. The awareness can be built by giving customers a clear and obvious access to the security policies on the Web site. These policies should describe in clear and simple terms security features such as encryption, firewalls, server authentication, and password protection. The security statements must convey the measures taken by the bank to protect the personal information of its customers and guarantee customers that no unauthorized access to their information is possible. Previous studies for less well-known e-tailers suggests that value-enhancing approaches, like assurances of security encryption and money-back guarantees, are important trust-building strategies (Dhruv, Jeanne, Gopalkrishnan, & Michael, 2003). Therefore it is hypothesized that:

H1: A clear, well-detailed, and easily accessible security policy posted on the Web site will lead the customers developing trusting beliefs about the bank.

Clarifying Privacy Policies. Privacy has been identified to be a major. if not the most critical, impediment to e-commerce (U.S. Public Interest Research Group, 2000). Privacy represents the control of transactions between person(s) and other(s), the ultimate aim of which is to enhance autonomy and/or minimize vulnerability (Margulis, 1977). Control over information is a key dimension of privacy and has been stressed by researchers in diverse disciplines including law, information systems, marketing, organizational and social sciences, and psychology (Foddy & Finighan, 1981; Goodwin, 1991; Milne, 2000; Nowak & Phelps, 1997). Customers in on-line environments, contrary to traditional retail environments, perceive little control over information privacy, and this has a striking influence on their willingness to engage in exchange relationships with Web merchants. Hoffman, Nowak, and Peralta (1999) suggest that trust arising from privacy concerns could best be achieved by allowing the balance of power to shift toward a more cooperative interaction between on-line business and its customers. An important step in this balancing process is recognizing customers' right to data ownership on the Internet. At a minimum, it means market-driven industry acceptance and enforcement of opt-out policies regarding information exchange. A more customer-oriented privacy policy will lead to valuable relationship exchanges, with important benefits for the customers and banks in this case. By disclosing the Web site's privacy practices, banks will significantly ease customers' privacy concerns and can build a more trusting environment for on-line transactions. Based on the above discussion, it is hypothesized that:

H2: A clear, well-detailed, and easily accessible privacy policy posted on the Web site will lead customers to develop trusting beliefs about the bank.

Guarantees. Customers are mostly concerned with the monetary aspect of e-banking transactions, as opposed to the means through which they happen. Here it is proposed that by removing the liability of an unauthorized transaction, the customers will develop high trusting beliefs about the service provider. Koller's (1988) description of customers as risk averse and more so in an uncertain on-line environment, strengthens this hypothesis. The shift of liability and providing a guarantee transfer the burden of security threats from the customer to the on-line service provider. It is therefore justified to argue that customers would perceive that a transaction would occur in accordance with their confident expectations if the risks of disputed transactions were no longer their own responsibility.

H3: The bank's guarantee to take the liability of unauthorized on-line transactions will lead customers to develop trusting beliefs about the bank.

Legal and Regulatory Compliance. Regulations enable people to feel assured about their expectations of the other party's future behavior (Sitkin & Beis, 1994). Aldrich and Fiol (1994) suggested that customers' perceptions of an organization's compliance and conformity with laws and regulations is critical to their perceptions of sociopolitical legitimization, which they described as the process by which key stakeholders accept a venture as appropriate and right. Deephouse (1996, 1999) supported the same argument in the context of organizational legitimacy. Application of these concepts to the e-banking context suggests that customers will develop high trusting beliefs when they are assured that the bank is complying with legal standards of e-banking, and it is hypothesized that:

H4: A statement of compliance with legal and regulatory standards posted on the Web site will lead customers to develop trusting beliefs about the bank.

Trusted Third-Party Security and Privacy Verifications. Thirdparty marks and seals bridge the physical and on-line environments, as they have a potential to operationalize standards and procedures in a meaningful way for on-line customers. They provide reassurance about a variety of qualities and features, including authenticity and compliance with standards. Harris Interactive (2001) reported that customers consider privacy seals important and are more willing to provide personal information to the site because of third-party verification. Recently a survey conducted for Privacy and American Business found that 91% of customers would feel more comfortable using sites participating in a third-party verification program, and 84% believed that they should be required for electronic businesses (Newsbytes, 2002).

H5: The presence of a third-party privacy and security seal on the bank's Web site will lead customers to develop trusting beliefs about the bank.

Situational Normality

McKnight et al. (1998) describe *situational normality* as a properly ordered setting that appears likely to facilitate a successful interaction. Most of the previous research has agreed on privacy and security being the most important drivers of on-line trust; however, not much is known about the effectiveness of other important potential determinants of customers' on-line trust, for example, Web-site quality and branding. Cheskin Research (1999) argued that besides seals of approval and privacy/security policies, factors such as branding, fulfillment, navigation, and presentation of information drives trustworthiness. However, the study did not propose a formal model linking these characteristics to trustworthiness and customers' intentions to trust. The following subsections propose three trust-building strategies based on situational normality mechanism.

Testimonials. Customer testimonials convey to other customers the bank's concern for its customers and its willingness and ability to transact in a trustworthy manner. They also convey, in a sense, reliable reports about past performance and successful fulfillment history. Customers' testimonials promote trust building based on stereotyping. McKnight et al. (1998) suggested that people tend to infer a stereotype from one or two positive attributes of the target and carry it over to the other attributes of the target, including trust. Research in social cognition considers customer testimonials as a form of consensus information (Fiske & Taylor, 1991) and suggests that when information about an issue is poor or ambiguous, people are especially susceptible to social influence. In the context of e-banking, where customers are not yet fully aware of the mechanism and functionalities of the service, it is proposed that the presence of customer testimonials will enhance the trusting beliefs.

H6: The presence of customer testimonials on the bank's Web site will lead customers to develop trusting beliefs about the bank.

Web-Site Design and Quality. Physically attractive sources are perceived to be credible sources (Etcoff, 1999). Translated into trust terms, this means that subjects will place higher trusting belief in the attractive person than in the unattractive one. When a customer enters into a physical branch of a bank that has an impressive, comfortable, and prosperous physical appearance, they are willing to depend on the bank to offer quality and superior services, not because they perceive the bank as trustworthy, but because outward appearance implies that it is solid and well managed. In the on-line environment, the bank's Web site is the meeting place between the customer and the bank, and the customer's first impressions are built upon the Web-site layout and quality. This basic human processing bias, "looking good is being good," also seems to hold true for evaluating the credibility of Web sites. Fung and Lee (1999) suggest that the Web site's information quality and good interface design enhance the formation of customer trust.

H7: High-quality, professionally designed Web sites will lead customers to develop trusting beliefs about the bank.

Brand Identification. The function of trust in on-line transactions is to make information manageable and to give confidence in the absence of complete information. Branding, in the same way, simplifies decision-making by standing for the missing knowledge. In the on-line environment, the brand stands as a symbol of quality and assurance. Research has identified brand as a surrogate for trust (Keller, 1998). Jevons and Gabbott (2000) proposed that Internet brand development is more relevant to service branding than physical goods, primarily due to intangibility, technology, and the deferred benefit, all of which contribute to a degree of trust dependency. Berry (2000) pointed out that branding is not just for tangible goods but is also a critical success factor for service providers. Strong brands increase customers' trust of invisible products while helping them to better understand and visualize what they are buying. Therefore it is hypothesized that:

H8. Customers will have high trusting belief toward Web sites whose brand names are familiar in the physical environment.

METHOD

Participants

Sixty-four Master of Science (banking and finance) and Master of Business Administration students in a large U.K. university participated in the experiment. The students responded to either e-mail announcements or posters on business-school notice boards. The participants ranged in age from 21 to 42 (M = 27); 39 were female and 25 were male. They were familiar with the Internet, averaging almost 6.5 years of Internet experience; 81.3% had made an on-line purchase prior to the experiment, and 60% of the participants had an e-banking account.

Apparatus and Setting

Three supervised sessions were held in a computer lab at the U.K. university where the students were enrolled. All the PCs in the computer lab had an identical configuration and were equipped with the same browser (Internet Explorer 5) and operating system (Windows NT). Arrangements were made so that the students could not change the "C" drive, including the "Temporary Internet Files" (where the cookies are stored). This was to ensure that the Web-site software could not use cookies to customize the interface and present subjects with a different interface based on past activities, further ensuring that all the students experienced exactly the same interface.

Procedure

Upon arrival, participants were seated at a randomly assigned computer work station. Each participant was provided with a set of research materials that included (1) a consent form, (2) the demographic questionnaire,

(3) four survey sheets designed to measure participant's assessment of each Web site, and (4) a pen. They were asked to log in to their PC and open Internet Explorer. The participants were then led to the introductory Web page that outlined instructions. Participants first completed the consent form and a demographic questionnaire, then started the experiment, which involved four sessions. After completing the four sessions, participants were debriefed about the purpose of the study and were told that a detailed description of the study could be obtained by emailing the researchers.

Scenario and Task

A list of all U.K. banks providing electronic banking services was made and reviewed by the authors, and four Web sites were selected. Disagreements in the group were resolved through discussion after a review of each Web site, with initial unanimity of 97%. The selected Web sites reflected a combination of privacy and security features, seals, and statements, as shown in Table 1.

The four Web sites included two banks with the same brand name as in the physical world and two with different brand names. The content of the security and privacy policies were different in all Web sites. Barclays had a link to both the security and privacy policies on its main ebanking page. However, in the case of Natwest, Smile, and First Direct, the main link was either to security or to the privacy policy, and the user had to follow pages to find the second policy. Barclays and Smile provided explicit guarantees to cover financial loss in case of an Internet fraud; in the case of First Direct this guarantee was found at the bottom of a security policy page. Natwest did not provide any guarantee to cover financial loss due to Internet fraud. These Web sites also differed substantially in terms of design and quality. Two expert academicians who are active in conducting research and publishing in the area of Web-site design and usability were asked to rate every Web site for its design and quality.

The selected Web-site addresses were presented to the participants in randomized order, and the participants were instructed to visit these sites one by one. They could navigate further into the sites once they were presented with initial home pages. The participants were asked to look for the information that is important for them to know before they open an e-banking account. They were instructed to note the session start and end time for each Web site and were advised that normally it would take them 10 minutes on each Web site. Final instructions were given to the participants to assess the Web sites on the basis of the information they get from these sessions and not on their personal experience or previous knowledge about the banks. It was mentioned to the participants that they would get $\pounds 10$ (about \$ 16.80 at the time of experiment) upon successfully completing the experiment and correctly com-

Trust Building Strategies	Barclays Bank www.barclays.co.uk	Smile Bank www.smile.co.uk	First Direct Bank www.firstdirect.co.uk	Natwest Bank www.natwest.com
H1: Link to security policy*	YES	YES	YES	NO
H2: Link to privacy policy*	YES	NO	NO	YES
H3: Guarantee	YES	YES	YES	NO
H4: Statement of compliance with laws	YES	NO	YES	YES
H5: Trusted third-party sign	NO	YES	ON	ON
H6: Customer testimonials	NO	YES	YES	ON
H7: Website quality	MEDIUM	WEAK	STRONG	MEDIUM
H8: Presence of brand identification	STRONG	WEAK	MEDIUM**	STRONG
* "VPC" implies that the link is present on the main	nage			

Table 1. Availability of the Proposed Trust Building Strategies on the Selected Banks' Web Sites.

* "YES" implies that the link is present on the main page. ** The brand name is different, but the logo is similar with the physical branch, i.e., HSBC.

pleting questionnaires. The participants spent on average 11 minutes in each session, affirming that they took the experiment seriously. After completing each session, they were then asked to indicate the extent to which they agree with the statements about each Web site.

Measures

The survey sheets distributed in the experiment asked participants to assume they were interested in opening an e-banking account. They were then asked to indicate how much they agreed with the statements about the bank's Web site. All multiple-item scales were measured on a 7-point Likert scale with anchors of *strongly disagree* (1) to *strongly agree* (7). The questions focused on participants' trusting intentions and trusting beliefs about the particular bank. Existing scales were used when available, and slight wording changes were made to adapt the question to the context of e-banking. The source and nature of these scales are discussed below. All participants rated every Web site.

Trusting Intentions. The trusting intentions captured the participants' intentions to trust the entity (i.e., on-line bank), service (i.e., e-banking), and the transaction medium (i.e., Internet) through five items. The Cronbach's alpha of the scale across all four Web sites was 0.80.

Perceived Ability. Perceived ability used six items based on the dimensions of competence, access to knowledge and technical skills, and continuous availability of service, and was adapted from the work of Bhattacherjee (2002), Gefen (2003), and Jarvenpaa, Knoll, and Leidner (1998). The scale originally exhibited low reliability, mostly due to one unreliable item that was dropped from further analysis. The Cronbach's alpha for the modified scale was 0.77 across all four Web sites.

Perceived Integrity. The scale measuring perceived integrity used seven items created for the adherence to accepted rules, consistency in words and action, and continuity of policies. These items were derived from the work of Bhattacherjee (2002) and Gefen (2003) and had an overall Cronbach's alpha of 0.71 across all four Web sites.

Perceived Benevolence. The four-item perceived benevolence scales focused on receptivity, empathy, and well being, and was based on work of Gefen (2003) and McKnight, Choudhury, and Kacmer (2002). Perceived benevolence had an overall Cronbach's alpha of 0.80 across all four Web sites.

Demographics. Participants were asked to indicate their age, gender, experience with Internet, and e-banking experience.

RESULTS

A one-way analysis of variance (ANOVA) and post hoc Scheffé multiple contrast analysis (Scheffé, 1953) were conducted to evaluate if participants' mean response values of trusting beliefs and trusting intentions were significantly different across the four selected banks. Cohen's (1988) measure of effect size (d) indicated that there were moderate to strong effect between trusting beliefs and trusting intentions. The ANOVA results indicate that significant differences exist among the four banks for perceived ability [F(3,248) = 10.18, p = .000, d = 0.63]. For perceived benevolence, results were also significant [F(3, 252) = 7.86, p = .000, d]= 0.77]. Participants' ratings of perceived integrity showed significant differences between Web sites [F(3,246) = 5.891, p = .001, d = 0.47]. Finally, participants indicated significant differences in their intentions to trust the bank for providing reliable e-banking services [F(3,247) = 3.355, p]= .007, d = 0.57]. For all of the ANOVAs, Scheffé post hoc tests were conducted to evaluate pairwise differences. Results are indicated by subscripts in Table 2. Participants ranked Barclays and First Direct as the highest on the perception of ability, benevolence, and integrity, giving overall trusting beliefs. For trusting intentions, participants ranked Barclays as the highest. Natwest consistently had the third ranking for all the trusting beliefs and for the trusting intentions, followed by Smile, which was ranked as the lowest by the participants in terms of trusting beliefs and trusting intentions.

Tables 3 and 4 report descriptive statistics of participants' ratings of the Web sites on the dimensions of perceived ability, perceived benevolence, perceived integrity, and trusting intentions, arrayed according to the proposed trust-building strategies. Ratings of the Web sites for the dimensions of perceived ability, perceived benevolence, perceived integrity, and trusting intentions seem to generally reflect the trend in the proposed trust-building strategies.

Pearson product-moment correlations were calculated between the eight proposed trust-building strategies, trusting beliefs, and trusting intentions to assess the strength of these potential linear relationships.

	Perce Abil	ived ity	Percei Benevo	ived lence	Percei Integr	ved rity	Trust Intent	ing tion	
Bank	M	SD	М	SD	М	M SD		SD	
Barclays	5.0 _a	4.3	4.8 _a	4.5	5.3 _a	3.8	3.1 _a	3.1, 4.6	
Smile	4.1_{ab}	6.3	$4.4_{a.b}$	6.8	$4.7_{a,b}$	4.7	$2.3_{\mathrm{a,b}}$	5.6	
First Direct	$5.0_{\rm b}^{1,0}$	5.3	$4.8_{\rm h}$	8.4	$5.3_{\rm h.c}$	4.5	$3.0_{\rm b}$	6.0	
Natwest	4.6 _{a b}	7.4	4.6	6.7	$5.0_{a,b,c}$	4.5	2.8_{b}	6.7	

Table 2.	Participants ³	Ratings o	f the	Bank	Attributes.
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Note: Means sharing subscripts within columns are significantly different at p < 0.05.

Attributes were measured on a scale of 1-7, with 1 = Strongly Disagree and 7 = Strongly Agree.

Proposed Trust	Perce	sived Abilit	y.	Perceiv	ved Beı	nevole	ance	Ρ	erceived	Integr	ity	Ę	usting	Intenti	on
Building Strategy	Present	Abset	nt	Presen	lt	Abse	ant	Pres	ent	Abs	ent	Pres(ent	Abse	ent
Security policy	5.6 (6.0)	4.6 (5.3)	4.6 (4	.3)	4.6	(4.5)	5.1	(6.6)	5.0	(6.7)	2.8	(5.4)	2.8	(6.7)
Privacy policy	4.8 (4.8)	4.6 ((6.9)	4.7 (4	.1)	4.6	(6.8)	5.1	(5.6)	5.0	(1.6)	3.0	(5.7)	2.7	(5.8)
Guarantee	4.7 (6.0)	4.6 (5.3)	4.6 (4	.3)	4.6	(4.5)	5.1	(9.9)	5.0	(6.7)	2.8	(5.4)	2.8	(6.7)
Statement of law	4.8 (5.7)	4.1 (6.3)	4.7 (4	.3)	4.4	(4.7)	5.2	(9.9)	4.7	(6.8)	3.0	(5.8)	2.3	(2.6)
Third-party sign	4.1 (6.3)	4.8 (5.7)	4.4 (4	(2.	4.7	(4.3)	4.7	(6.8)	5.2	(9.9)	2.3	(5.6)	3.0	(5.8)
Customer testimonials	4.6 (6.9)	4.8 (4.8)	4.6 (6	(8)	4.7	(4.1)	5.0	(2.6)	5.1	(2.6)	2.7	(5.8)	3.0	(5.7)

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Proposed Trust	Pe	rceived /	Ability	Perceiv	ved Bene	evolence	Perce	sived Inte	egrity	Trus	sting Int	ention
Building Strategy	\mathbf{STR}	MED	WEAK	STR	MED	WEAK	STR	MED	WEAK	STR	MED	WEAK
Web site quality	5.0	4.8	4.1	4.8	4.7	4.4	5.3	5.1	4.7	3.0	3.0	2.3
	(7.4)	(4.8)	(6.3)	(4.5)	(4.1)	(4.7)	(8.4)	(5.6)	(6.8)	(0.0)	(5.7)	(2.6)
Brand identification	4.8	5.0	4.1	4.7	4.8	4.4	5.1	5.3	4.7	3.0	3.0	2.3
	(4.8)	(7.4)	(6.3)	(4.1)	(4.5)	(4.7)	(5.6)	(8.4)	(6.8)	(5.7)	(6.0)	(2.6)
Note: Mean (Standard Dev STR (Strong) MED (Modii	iation)	N uccured	to the solution	- J					-			

STR (Strong), MED (Medium), and WEAK represents the relative strength of the proposed trust building strategy in the respective website. Attributes were measured on a scale of 1-7, with 1 = Strongly Disagree and 7 = Strongly Agree.

The results yielded very strong support for the four hypotheses related to structural assurance, that is, H1 (security policy), H2 (privacy policy), H3 (guarantee), and H4 (legal statements), and one hypothesis related to situational normality, that is, H7 (Web-site quality). Each of these hypotheses was found to significantly increase participants' trusting beliefs (perceived ability, perceived integrity, and perceived benevolence) about the bank and their trusting intentions. Security policy (H1) has a strong positive correlation with perceived ability (r = .77; p = .00), with perceived benevolence (r = .45; p = .03), with perceived integrity (r = .57; p = .03), and with trusting intentions (r = .77; p = .05). Privacy policy (H2) was strongly correlated with perceived benevolence (r = .87; p =.007), with perceived integrity (r = .67; p = .001), and with trusting intentions (r = .41; p = .166). Positive correlation was observed for H3. that is, guarantee with perceived benevolence (r = .75; p = .001), with perceived integrity (r = .87; p = .001), and with trusting intentions (r =.77; p = .05). For hypothesis H4 (legal statement), a correlation was observed only with perceived benevolence (r = .27; p = .05) and with perceived integrity (r = .47; p = .03).

H5 (third-party sign) and H6 (customer testimonials) were not supported by the results. The correlations of trusted third-party sign and customer testimonials with trusting beliefs and trusting intentions were non-significant, suggesting that their presence had no effect on participant's intention to trust the bank. Web-site quality was strongly correlated with perceived ability (r = .87; p = .01), perceived integrity (r = .75; p = .03), and trusting intentions (r = .57; p = .01). Brand identity (H8) was strongly correlated with perceived benevolence (r = .87; p = .007), perceived integrity (r = .78; p = .03), and trusting intentions (r = .77; p = .006).

DISCUSSION

One of the primary goals of the study was to develop a deeper understanding of building and communicating trust in e-banking by studying the relative importance of Web-site attributes reflecting security and privacy. Five strategies based on structural assurance and three strategies based on situational normality mechanisms, as shown in Figure 1, were initially proposed. The structural assurance that reflects the environmental and structural perception about the Web site influenced participants' trusting beliefs and their trusting intentions. McKnight et al. (1998) note that structural assurance is not about the vendor or the site, but about the general Web environment, yet the strategies based on structural assurance mechanism played a significant role in developing customers' trusting perceptions about the bank. Along the same lines, the results provide strong support for the hypotheses that security policy (H1), privacy policy (H2), and a statement of compliance with banking codes and procedures (H3) will lead the customers in developing high trustworthiness beliefs about the bank.

Web-site quality is a strong factor in perceptions of trustworthiness: in fact, it is one of the strongest factors affecting customers' trusting beliefs, with a high mean score for trusting beliefs and trusting intentions. This suggests that customers interacting with a Web site for the first time make strong inferences about the attributes of the bank from what they experience on the site. Thus, first impressions of the Web site are important to trust building. This also suggests that seeing something concrete like a well-designed Web site allows the customer to draw stronger trustworthiness inferences about the bank than even when the brand identification of the bank, as in the case of First Direct, is medium. Previous research has shown that Web-site design features influence customers' willingness to develop trusting intentions, as these attributes focus on creating a satisfying and enjoyable experience (Cheskin, 1999). The overall results indicate that First Direct and Barclays emerged as the most trusted banks. First Direct has the highest scores for perceived ability and perceived integrity, and was second to Barclays in perceived benevolence and trusting intentions. This result, on the one hand, suggests the importance of the presence of a physical branch and the recognition of brand name, and on the other also indicates that strategic manipulation tactics are capable of increasing customers' perception of trustworthiness in the absence of prior familiarity and a strong brand presence. The result also confirms the Tyler and Kramer (1996) argument that situational dimensions such as Web-site design and trustbuilding behavior can be used to affect customer's level of trust.

The above discussion leads to the fact that structural assurance and situational normality mechanisms both had an impact on customers' trustworthiness perceptions, suggesting that banks need to use a portfolio of strategies to build the customer's trust. The results further suggest that communicating trustworthiness is an important factor in the trust-development process. As Morgan and Hunt (1994) noted, communication is a major precursor of trust. This communication can take place directly or indirectly in various forms. However, the important factor is that meaningful and timely information that has the potential to influence customer's trustworthiness perceptions is communicated.

Implications for Practice and Research

This article contributes to practice and research in multiple ways. The contribution to research is by increasing the understanding of how to build and communicate trust in an on-line environment. The specific domain of the article, that is, e-banking, introduces a new context to the on-line trust research. For practice, it examines the effectiveness of specific manageable levers in Web-site design for building customer's trust. It also provides several preliminary insights into the role of security, privacy, branding, and other Web-site attributes in the context of e-banking. For practicioners, the results suggest that security is highly valued by cus-

tomers. A concern of e-businesses that is supported in the findings of the present study is the fact that customers might not be familiar with the third-party signs. Research conducted by The Banking Industry Technology secretariat (BITS, 1998) reported that customers view these signs as less assuring, difficult to understand, vague, commercially motivated, and having no "police power." A practical implication for the banking sector could be to take it as an opportunity for developing a mark, which is widely marketed and will be accepted as credible by the customers. In the context of privacy policy, the bank's Web site must communicate that the procedures for handling information are performed within the framework of well-thought-out customer-service policies, thus demonstrating reliability and credibility. The privacy and security policies should be presented in a manner that is obvious, accessible, and consistent with the industry-adopted principles. The bank should address the collection, storage, and dissemination of customer information. The customers should be given a clear choice as to whether their personal information can be used in any manner.

The results also suggest that reliability and dependability is associated with the brand, and this association reduces the need for prolonged information search. The Web sites with longer established off-line operations should take advantage of the reputation of those operations, using the same logos and slogans found off-line to increase the on-line "situational normality" (McKnight et al., 1998).

Finally, an important finding has to do with consumers' perception of trustworthiness based on Web-site design. A professionally designed Web site provides a solid feel, and clear navigation conveys respect for customers and an implied promise of good service. However, in e-commerce, not just the Web site, but the entire shopping experience, including company information, range of services, branding, promotions, security/privacy policies, fulfillments and customer service, affect the user's perception of trustworthiness of the Web site. In a sense, a Web site with high-quality design and trust-inducing features functions as a skillful salesperson for the company and, therefore, moderates the disadvantages of an impersonal Web site.

Methodological Issues and Directions for Future Research

Some of the limitations inherent in the design of the present study provide avenues for future research opportunities. This study used realworld Web sites, which represents the use of a live environment, and adds to the external validity of the results in that it embodies critical realism (Cook & Campbell, 1979). Although this was strength of the study, certain potential factors of customer's trust and willingness to join e-banking services, for example, ease of use, usefulness (Gefen, 2003), and download time (DiClemente & Hantula, 2002), were left uncontrolled. Although it is both interesting and important to understand how

these perceptions affect the customers' trusting intentions, there is always a practical limit on the number of factors that any study can take into account. Another potential limitation of the study was that the participants were asked to assume that they are interested in opening an ebanking account with the bank, but were not actually given an opportunity to do it practically. This leads to the factors such as lack of interest and their good or bad prior experience with the Web site affecting the validity of results. Future research needs to consider the extent to which the prior experience with the physical branch of the bank influences customers' trusting intention in the electronic environment. Experience supplies facts that can quickly displace illusions and assumptions (McKnight et al., 1998). Researchers should see if with experience and over time, the three trusting beliefs, that is, ability, integrity, and benevolence, become more differentiable constructs than in the initial period. Studying the effect of violating on-line trust may also be important. Singh, Tucker, and House (1986) found that firms that had and lost an important indicator of trustworthiness were worse off than those firms that never enjoyed trustworthiness. If this is applied to the e-banking scenario, banks may damage their perceived trustworthiness if trust-building strategies employed are not validated by experience.

The positioning of the trust-building cues is another avenue of research. Participants showed varying perceptions of trustworthiness toward the Web site that presented a detailed subsection of a specific policy, rather than placing a direct link on the main page. There could be additional dimensions that may prove important in development of customers' perception of the trustworthiness of the banks, which were not included in this study. Jarvenpaa, Tractinsky, and Vitale (2000), for example, proposed that statements conveying the size and reputation of the on-line merchant play an important role in development of customers' trust.

The use of different methodologies and contexts may prove to be fruitful. Future research should provide other methods in order to provide triangulation with the present findings. A traditional survey or qualitative interviews with experienced and nonexperienced potential customers may be useful for in-depth studying of a limited set of trust-building strategies. Studying the combination effect of trust building strategies with a focus on the incremental gain in perceived trustworthiness as a result of adding additional information could also be explored.

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The authors acknowledge the guest editor and the anonymous reviewers for their constructive comments and suggestions on earlier versions of this article. Financial support for this study was provided by the Cardiff Business School, Cardiff University, United Kingdom. An earlier version of this article was awarded the Best Paper prize at the 2003 International Business Information Management Conference, Cairo, Egypt.

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